

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number  
**WO 2005/059156 A3**

(51) International Patent Classification<sup>7</sup>: C12Q 1/68,  
C12N 15/11

(21) International Application Number:  
PCT/FI2004/000776

(22) International Filing Date:  
17 December 2004 (17.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
20031867 19 December 2003 (19.12.2003) FI

(71) Applicant (for all designated States except US): MO-  
BIDIAG OY [FI/FI]; Haartmaninkatu 8, FI-00290  
Helsinki (FI).

(72) Inventors; and

(75) Inventors/Applicants (for US only): PALGI, Jaan  
[FI/FI]; Koetilankuja 2 E 61, FI-00790 Helsinki (FI).  
JALAVA, Jari [FI/FI]; Niklaksenkatu 10 as 28, FI-20100  
Turku (FI). NIKKARI, Simo [FI/FI]; Sirkkalankatu 25 b  
46, FI-20700 Turku (FI).

(74) Agent: KOLSTER OY AB; Iso Roobertinkatu 23, P.O.  
Box 148, FI-00121 Helsinki (FI).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ,  
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,  
ZM, ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

**Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv)) for US only

**Published:**

— with international search report

(88) Date of publication of the international search report:  
9 September 2005

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: NUCLEIC ACID PROBES AND BROAD-RANGE PRIMERS FROM REGIONS IN DNA DIRECTED RNA POLY-  
MERASE SUBUNIT B GENES, AND METHODS IN WHICH THEY ARE USED

(57) Abstract: The invention relates to nucleic acid probes and to broad-range primers that are useful in the identification of bacte-  
rial species and the diagnosis of bacterial infections. Es-pecially, the invention relates to specific nucleic acid probes that originate from  
hyper-variable regions situated near the conserved sequences of the gene for RNA poly-merase beta subunit, rpoB (DNA directed  
RNA poly-merase subunit B) of infection-causing bacteria. The in-vention also relates to broad-range primers originating from the  
conserved regions of rpoB genes. In addition, the invention relates to the use of these nucleic acid probes and broad-range primers  
in the diagnosis of bacterial in-fections as well as to diagnostic methods in which these nucleic acid probes and broad-range primers  
are used.

WO 2005/059156 A3